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Ralf Brederlow

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EXAMINER

MORTELL, JOHN F

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/562,458	<b>Applicant(s)</b> BREDERLOW ET AL.	
	<b>Examiner</b> JOHN F. MORTELL	<b>Art Unit</b> 2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Status of the Application***

1. Claims 12-31 are pending in the application. The applicant has cancelled claims 1-11.

The applicants having amended the drawings and the specification, the previous objections to the drawings are withdrawn.

The applicant having explained that the two paragraphs on page 5 are different and that the two paragraphs on page 6 are different, the objections to the disclosure are withdrawn.

### ***Drawings***

2. The drawings are objected to because the corrected drawing sheets do not comply with 37 CFR 1.121(d), and corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the first Office Action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as

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either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12-15, 17-20, 22-26, 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031).

Regarding claim 12, Baude teaches RFID tag 58 in FIG. 10, which includes output inverter 76 that is disclosed as ring oscillator 33 in FIG. 6 ([0057]), comprising:

an electronic component operable with an AC voltage ([0005], [0044], [0045]; FIG. 6; FIG. 10: 58), the electric component comprising:

at least one input (FIG. 6: VIN);

at least one output (FIG. 6: OUT);

and a pair of functionally identical electronic sub-components (FIG. 6: 36A, 36G);

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wherein the at least one input of the electronic component is connected to a respective input of the two functionally identical electronic sub-components (FIG. 6: 36A);

wherein the at least one output of the electronic component is connected to a respective output of the two functionally identical electronic sub-components (FIG. 6: 36G).

Baude does not teach an RFID tag:

wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage.

Regarding claim 12, Kaiser, in the same field of endeavor, teaches a transponder tag:

wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage (col. 6, lines 37-43; FIG. 4)

for the benefit of enabling a transponder tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate (col. 3, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the transponder tag:

wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be

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picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage,

as taught by Kaiser, with the RFID tag taught by Baude because it would enable the RFID tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate.

Regarding claim 13, the combination above teaches the electronic component of claim 12, and Baude further teaches an electronic component:

further comprising a plurality of pairs of functionally identical electronic sub-components. (FIG. 6: 36A-36G)

Regarding claim 14, the combination above teaches the electronic component of claim 12, and Baude further teaches an electronic component:

wherein at least one pair of functionally identical electronic sub-components comprises one of logic-gates, inverters and flip-flops. (FIG. 6: 35A, 36B)

Regarding claim 15, the combination above teaches the electronic component of claim 12, and Baude further teaches an electronic component:

wherein the electronic component comprises a coil. (FIG. 10: 67)

Regarding claim 17, the combination above teaches the electronic component of claim 12, and Baude further teaches an electronic component:

wherein the electronic sub-components of a pair of functionally identical electronic sub-components comprises a switch. (FIG. 6: 34A-34G, 35A-35G)

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Regarding claim 18, the combination above teaches the electronic component of claim 18, and Baude further teaches an electronic component:

wherein the electronic component is configured within an ID tag.  
([0044], [0051], FIG. 10: 58, 76)

Regarding claim 19, the combination above teaches the electronic component of claim 18, and Baude further teaches an electronic component:

wherein the ID tag comprises a memory for storing information.  
([0052], FIG. 10: 70)

Regarding claim 20, the combination above teaches the electronic component of claim 18, and Baude further teaches an electronic component:

wherein the ID tag comprises an encoder for coding information.  
([0058], [0059]; Fig. 11: 70, 72)

Regarding claim 22, Baude teaches:

an electronic arrangement ([0005]) comprising:

a read device (Fig. 10: 56);

an ID tag with an electric component (FIG. 10: 58) comprising:

a first sub-component with an input and an output (FIG. 6: 36A);

a second sub-component with an input and an output (FIG. 6: 36B);

an AC signal received by the inputs of the first and second sub-components, the AC signal having a first half-wave and a second half-wave (FIG. 6: 12, 34A, 35A; FIG. 10: 66);

wherein the ID tag and read device are configured to communicate with each other without contact ([0054], [0060]; FIG. 10: 56, 59, 64, 67; FIG. 11: 59, 67)

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Baude does not teach:

means for providing an output from only the first sub-component during the first half-wave; or

means for providing an output from only the second sub-component during the second half-wave;

Regarding claim 22, Kaiser, in the same field of endeavor, teaches a transponder tag comprising:

means for providing an output from only the first sub-component during the first half-wave (col. 6, lines 37-43; FIG. 4); and

means for providing an output from only the second sub-component during the second half-wave (col. 6, lines 37-43; FIG. 4)

for the benefit of enabling a transponder tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate (col. 3, lines 42-47).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the transponder tag:

means for providing an output from only the first sub-component during the first half-wave; and

means for providing an output from only the second sub-component during the second half-wave,

as taught by Kaiser, with the RFID tag taught by Baude because it would enable the RFID tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate.



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Regarding claim 23, the combination above teaches the electronic arrangement of claim 22, and Baude further teaches an electronic arrangement:

wherein the first and second sub-components are functionally substantially similar. (FIG. 6: 36A, 36B)

Regarding claim 24, the combination above teaches the electronic arrangement of claim 23, and Baude further teaches an electronic arrangement:

wherein the electronic component further comprises a plurality of pairs of functionally identical electronic sub-components. (FIG. 6: 36A-36G)

Regarding claim 25, the combination above teaches the electronic arrangement of claim 23, and Baude further teaches an electronic arrangement:

wherein at least one pair of functionally identical electronic sub-components comprises one of logic-gates, inverters and flip-flops. (FIG. 6: 36A, 36B)

Regarding claim 26, the combination above teaches the electronic arrangement of claim 23, and Baude further teaches an electronic arrangement:

wherein the electronic component comprises a coil. (FIG. 10: 67)

Regarding claim 28, the combination above teaches the electronic arrangement of claim 23, and Baude further teaches an electronic arrangement:

wherein the electronic sub-component comprises a switch. (FIG. 6: 34A)

Regarding claim 29, the combination above teaches the electronic arrangement of claim 23, and Baude further teaches an electronic arrangement:

wherein the ID tag comprises a memory for storing information. ([0052]; FIG. 6: 70)

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Regarding claim 30, the combination above teaches the electronic arrangement of claim 29, and Baude further teaches an electronic arrangement:

wherein the ID tag comprises an encoder for coding information.  
([0058], [0059]; Fig. 11: 70, 72)

5. Claim 16 and Claim 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031) and further in view of Seal (US 6,693,511 B1).

Regarding claim 16, the above combination of Baude and Kaiser teaches the electronic component of claim 12 but does not teach an electronic component:

further comprising a voltage limiter, which limits the AC voltage lying across an electronic sub-component of the pair of functionally identical electronic sub-components.

Regarding claim 16, Seal, in the same field of endeavor, teaches radio frequency identification (RFID) tags comprising a pair of diodes acting as a symmetrical diode limiter for the benefit of stopping voltage overload from the stronger input level of a signal from a transponder. (col. 13, lines 41-46; FIG 17: 1703, 1705)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the pair of diodes acting as a symmetrical diode limiter, as taught by Seal, with the electronic component of the above combination because it would enable the device to stop voltage overload from the stronger input level of a signal from a transponder.

Regarding claim 27, the above combination of Baude and Kaiser teaches the electronic arrangement of claim 23 but does not teach an electronic arrangement:

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wherein the electronic component further comprises a voltage limiter, which limits the AC voltage lying across an electronic sub-component of the pair of functionally identical electronic sub-components.

Regarding claim 27, Seal, in the same field of endeavor, teaches radio frequency identification (RFID) tags comprising a pair of diodes acting as a symmetrical diode limiter for the benefit of stopping voltage overload from the stronger input level of a signal from a transponder. (col. 13, lines 41-46; FIG 17: 1703, 1705)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the pair of diodes acting as a symmetrical diode limiter, as taught by Seal, with the electronic arrangement of the above combination because it would enable the electronic arrangement to stop voltage overload from the stronger input level of a signal from a transponder.

6. Claim 21 and claim 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031) and further in view of Bayron et al. (US 5,769,051).

Regarding claim 21, the above combination of Baude and Kaiser teaches the electronic component of claim 20, and Baude further teaches an electronic component:

wherein the encoder is configured such that it can be used for pulse-coding. ([0057], [0060]; FIG. 11: 72, 76)

Baude does not teach an electronic component wherein the encoder is configured such that it can be used for time-coding.

Regarding claim 21, Bayron, in the same field of endeavor, teaches a passive transponder:

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wherein the encoder is configured such that it can be used for time-coding (col. 6, lines 57-64; FIG. 7: 96)

for the benefit of enabling a keychain unit to operate as a passive transponder for interfacing with an engine controller. (col. 2, lines 33-34, 64-65)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the passive transponder:

wherein the encoder is configured such that it can be used for time-coding,

as taught by Bayron, with the electronic component of the combination above because it would enable the electronic component to operate as a passive transponder for interfacing with an engine controller.

Regarding claim 31, the above combination of Baude and Kaiser teaches the electronic arrangement of claim 30, and Baude further teaches an electronic arrangement:

wherein the encoder is configured such that it can be used for pulse-coding. ([0057], [0060]; FIG. 11: 72, 76)

Baude does not teach an electronic component wherein the encoder is configured such that it can be used for time-coding.

Regarding claim 31, Bayron, in the same field of endeavor, teaches a passive transponder:

wherein the encoder is configured such that it can be used for time-coding (col. 6, lines 57-64; FIG. 7: 96)

for the benefit of enabling a keychain unit to operate as a passive transponder for interfacing with an engine controller. (col. 2, lines 33-34, 64-65)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the passive transponder:

wherein the encoder is configured such that it can be used for time-coding,

as taught by Bayron, with the electronic component of the combination above because it would enable the electronic component to operate as a passive transponder for interfacing with an engine controller.

### ***Response to Arguments***

The Applicants' arguments filed September 2, 2008, have been fully considered, but they are not persuasive.

### ***Rejection of Claims under 35 U.S.C. § 103(a)***

The applicants argue against the rejection of claim 12 under 35 U.S.C. 103(a) as being unpatentable over Baude et al. (PG Pub. 2004/0119504 A1) in view of Kaiser et al. (US 5,870,031). (Note: In their Remarks, the applicants argue against the rejection of claim 1, which the applicants have cancelled. For purposes of this Office Action, the references to claim 1 in these arguments will be construed to be references to claim 12, the first independent claim remaining in the application. If the applicants did not intend references to claim 1 to be references to claim 12, then the applicants' amendment is nonresponsive for failing to particularly identify the object of the applicants' arguments.)

Against the rejection of claim 12, the applicants argue that claim 12 teaches that the electronic sub-components are driven by the first half-wave and the second half-wave, respectively, so that a rectifier, which converts an AC-voltage into a DC-voltage, is not necessary in this case, but that this is not taught or suggested in the art of record.

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In support of this argument, the applicants note that the Examiner admits that the feature that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage, is not disclosed by the Baude reference. In further support of this argument, the applicants argue that Kaiser, which is cited to teach this limitation of claim 12, merely discloses a rectifier, which converts an AC-voltage into a DC-voltage, but because the electronic circuit of the Baude reference is driven by an AC-voltage, a person skilled in the art would not combine the AC-circuit with the rectifier of the Kaiser reference, which converts an AC-voltage into a DC-voltage.

Contrary to this argument, the cited references teach every limitation stated in claim 1. Baude has not been cited for the limitation that is the subject of the applicants' argument. As shown in the first Office Action, Kaiser teaches a transponder tag:

wherein the electronic component is configured such that at the at least one output only one output signal of a first sub-component of the pair of functionally identical electronic sub-components can be picked up during a first half-wave of an AC voltage, whereas only one output signal of the second sub-component of the pair of functionally identical electronic sub-components can be picked up during a second half-wave of the AC voltage.

Contrary to the applicants' argument, Kaiser does not employ a rectifier to accomplish this task, but the means by which Kaiser accomplishes this task is irrelevant to the argument so long as Kaiser teaches all the elements for which it has been cited.

The applicants argue that a person skilled in the art would not combine the AC-circuit with the Kaiser reference, but as shown in the first Office Action, Kaiser teaches the motivation for combining these references, namely, for the benefit of enabling a transponder tag to minimize the voltage drop between the alternating current peak voltage and the output voltage and minimizing the voltage drop between ground and the integrated circuit substrate. The applicants' argument does not identify a single specific reason why this motivation is inadequate.

The applicants further argue that even if one integrated the rectifier of the Kaiser reference into an electronic circuit of the Baude reference, this would not lead to the electronic component according to claim 1, wherein a rectifier, which converts the AC-voltage into a DC-voltage, is not necessary.

Contrary to this argument, Kaiser does not employ a rectifier, but the means by which Kaiser operates is irrelevant so long as Kaiser teaches the limitations of claim 1 for which it has been cited.

The applicants argue that for analogue reasons, independent claim 22 is inventive in the light of the art of record, as are the dependant claims. This argument fails for reasons analogous to the reasons given above to rebut the arguments against the rejection of claim 12.

For all the foregoing reasons, the Applicants' request for withdrawal of the 35 U.S.C. § 103(a) rejections of the claims and for allowance of these claims is denied.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN F. MORTELL whose telephone number is (571)270-1873. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A. Hofsass can be reached on (571)272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JM/

/Jeff Hofsass/

Supervisory Patent Examiner, Art Unit 2612

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